

Remarks

Claims 1, 3-5 and 7 are pending. Claim 2 is canceled because it is identical to Claim 7 (except that Claim 2 is a dependent claim and Claim 7 is an independent claim). Claim 4 is amended to incorporate the limitation of Claim 6, which is canceled. Claims 8-26 are canceled as being drawn to a non-elected invention.

Rejections Based On Hahn, Pilliar and Trocynski -- Claims 1-5.

Claims 1, 4 and 7 were rejected as being anticipated by Hahn (3,605,123), Pilliar (3,855,638) or Trocynski (6,426,114). Claims 3 and 5 were rejected as being obvious over Hahn.

Claims 1 and 7 recite a metallic monolith having a dense core surrounded by a porous periphery. Claim 4 recites a monolithic metallic structure having a dense core surrounded by a porous periphery. Monolithic means "consisting of one part; solid or unbroken." Random House Webster's College Dictionary (2000).

Hahn teaches a dense metal base with a porous metal layer on the base. Pilliar teaches a metal substrate with a porous metal coating. Trocynski teaches hydroxyapatite coatings for dental implants. A layered base and a coated substrate are not monolithic, and the Examiner makes no assertion to the contrary.

Rather, the Examiner states that the "dense core" in Hahn, the "solid metallic substrate" in Pilliar and the "titanium metal substrate" in Trocynski are considered monolithic. Even if this is true, it does not support the rejection. Claims 1, 4 and 7 require that the monolithic structure have both a dense core and a porous periphery. In Hahn, Pilliar and Trocynski, the only structure that might be considered monolithic is the dense core/substrate. The porous layer/coating is not part of the core/substrate. Hence, none of Hahn, Pilliar and Trocynski teach or suggest a monolithic structure having both a dense core and a porous periphery. Indeed, this combination is one of the key novel features of various embodiments of the invention. As noted in paragraph 34 of the patent application, the inventors discovered somewhat by accident a microwave sintering process that yields a monolithic metal (e.g., titanium) structure with a dense core surrounded by a porous periphery. So far as the inventors are aware, such a monolithic metal structure is new. Certainly, there is nothing in the cited art that leads to a different conclusion.

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Claims 3 and 5 also distinguish over the cited art at least due to their dependence on Claims 1 and 4, respectively.

The foregoing is believed to be a complete response to the outstanding office action.

Respectfully submitted,



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